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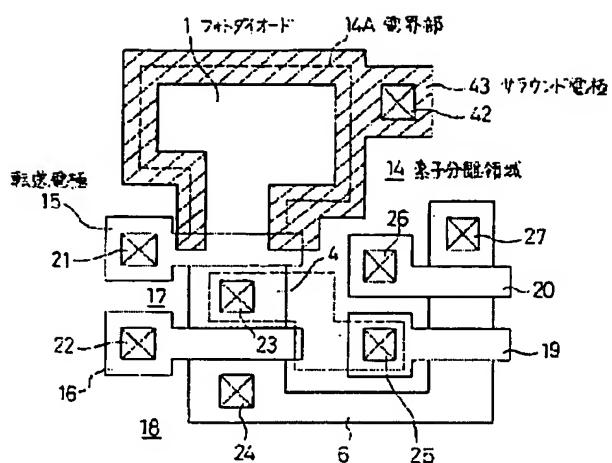
APPLICATION DATE : 12-02-02
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APPLICANT : SONY CORP;

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TITLE : SOLID-STATE IMAGE PICKUP DEVICE
AND ITS MANUFACTURING METHOD



ABSTRACT : PROBLEM TO BE SOLVED: To restrain irregularity between picture elements and increase element isolating ability by reducing a leakage current of a photoelectric transducer.

SOLUTION: A transfer electrode 15 for a transfer gate is arranged on a boundary part between a photodiode 1 arranged on a silicon substrate and a charge detector 4. A surround electrode (surrounding type electrode) 43 is arranged on a boundary 14A between the photodiode 1 and an element isolating region 14. Thus, a periphery of the photodiode 1 is surrounded by the transfer electrode 15 and the surround electrode 43, and a negative voltage and a GND voltage are applied to the electrodes 15, 43, so that generation of a leakage current during a term of charge accumulation is restrained. It is possible that the transfer electrode 15 and the surround electrode 43 are formed of a unified electrode film 44, and also possible that a surround electrode 43A wherein a part opposite to the transfer electrode 15 is eliminated is used.

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